

Vocia®

**Paging Station Kit 1
(PSKIT-1)**

Manual

December 2013

IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this product near water.
- 6) Clean only with dry cloth.
- 7) Do not block ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other product (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong.

The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

- 10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the product.

- 11) Only use attachments/accessories specified by the manufacturer.

- 12) Use only with equipment rack, cart, stand or table designed to provide adequate mechanical strength, heat dissipation and securement to the building structure.



When a cart is used, use caution when moving the cart and product combination to avoid injury from tip-over.

- 13) Unplug this product during lightning storms or when unused for long periods of time.

- 14) Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.

Explanation of Graphical Symbols:



Lightning Bolt: Hazardous Live voltages present when this unit is in operation. Do not touch terminals marked with this symbol while the unit is connected to live power.




Exclamation Point: Replace components (i.e. fuses) only with the values specified by the manufacturer. Failure to do so will compromise safe operation of this unit.



Hazardous Moving Fan Blades: Remove power before servicing and keep away from moving fan blades.

WARNING - To reduce the risk of fire or electric shock, do not expose these products to rain or moisture. These products must not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on these products.

WARNING - 100 Volt Speaker terminals marked with the symbol  are Hazardous Live. External wiring connected to these terminals requires installation by a Skilled or Instructed Person.

WARNING - MAINS Powered Products employ Safety Grounding and must be connected to a MAINS socket that is properly grounded to provide a protective earthing connection.

Disconnect Device - The MAINS plug is used to disconnect MAINS power and must remain readily operable.

CAUTION - When POTS Telephone Interface options are provided, connections to the telecom circuits of this device must be made by qualified, trained personnel. To reduce the risk of fire, use only No. 26 AWG solid copper wire for telecom circuit connections.

Intended for Installation and Service by Skilled Personnel Only:

CAUTION - To reduce the Risk of Electric Shock, Installation and Service of Biamp Products should be conducted only by Skilled Persons who are Biamp Qualified Audio Installation Professionals.

Do not perform any servicing other than that contained in the Operating Instructions unless you are a Skilled Person qualified to do so.

Skilled Persons must disconnect AC MAINS Power before opening product.

CAUTION - The Installation steps for 'Auxiliary Power' are for use by Skilled Personnel only and must comply with all local codes.

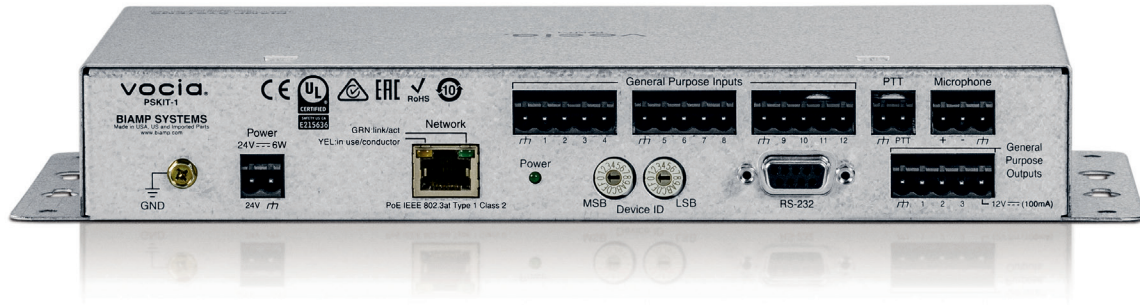
- National Electrical Code, ANSI/NFPA 70 for United States.
- Canadian Electrical Code, Part 1, CSA C22.1, Sections 2-128, 12-010(3) and 12-100 for Canada.

Wall Mounting Instructions - Wall-mounted products must be securely fastened to drywall or similar surface using a minimum of 4 wood screws (2 screws for product with only two mounting holes). Alternate fasteners which may be used include Drywall Anchors, self-tapping sheet metal screws located in metal studs or wood screws extending minimum ½ inch into wood studs.

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VOCIA PAGING STATION KIT (PSKIT-1)

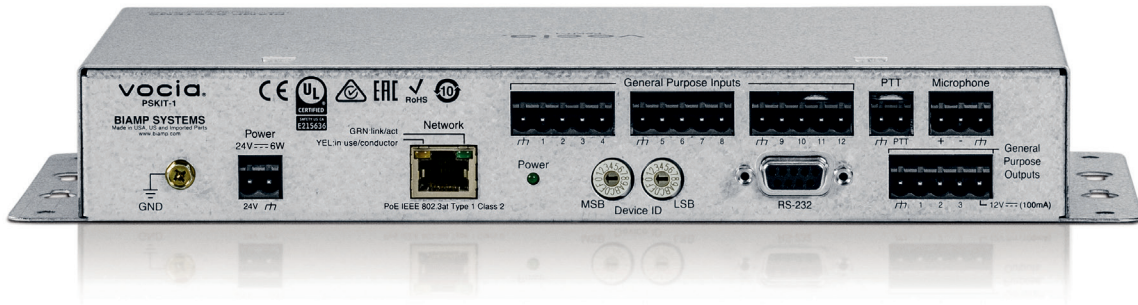


The PSKIT-1 is a standalone Paging Station Kit designed to allow for direct connection to third-party equipment such as fireman's microphone stations or custom designed fire panels. The PSKIT-1 feature embedded DSP and on-board memory to support standard and advanced public address and mass notification functionalities. The PSKIT-1 can store 999 user-configurable Page Codes. Additionally, all device-specific configuration information is stored locally, which means the PSKIT-1 does not rely on a centralized controller for processing and Page routing. Thus all the processing, routing and storage functionality in a Vocia system remains decentralized. This eliminates a single point of system failure and permits redundancy to be built directly into the network. As part of a Vocia system, the PSKIT-1 meets paging requirements for facilities of all sizes.

FEATURES

- Up to 999 user-configurable Page Codes
- 8 priority levels: 4 regular priority levels, 4 emergency priority levels
- Local digital signal processing, including gain, filters, and compressor/limiter
- Local storage of configuration data
- Local storage of default and/or custom chimes
- Built-in store and forward functionality
- CobraNet® audio/control, plus power on single cable
- Dual/Redundant Powering (PoE, 24V DC)
- RS-232 control of functionality for third-party control systems
- Support for an optional Biamp-supplied high-quality, handheld or gooseneck microphone
- Monitored microphone capability when using dual capsule Vocia microphone
- 12 General Purpose Inputs
- 3 General Purpose Outputs
- Microphone and Push-to-Talk (PTT) input
- Store and forward functionality
- Sturdy, surface-mounted component housing
- Rotary ID switches for unit identification
- **CE** marked, **UL** certified and **RoHS** compliant
- Covered by Biamp Systems' 5-year warranty

VOCIA PAGING STATION KIT (PSKIT-1) FRONT PANEL



Setup and Use

The Vocia software provides an intuitive interface for configuration, DSP equalization and programming of the PSKIT-1. The information supplied by this manual relates to physical connections and assignment. For more details on software setup, please consult the Vocia Help File.

Power Indicator

⚠ Caution - Due to potential energy hazard, connections to the Auxiliary Power 24V DC inputs must be made by a qualified electrician or other qualified person

The Vocia PSKIT-1 is capable of operation from both PoE and 24V DC power. If both are being used, PoE power is given priority. The Power Indicator LED behaves in the following manner:

LED Description	
None	No power
Solid green	Powered

CONNECTIONS

Power



The PSKIT-1 supports powering via 802.3af or 802.3at (Type 1) PoE switches or external PoE Supplies. Alternatively the device can be powered using the Power connector and an external 24V DC supply. Both supplies can be connected at the same time without affecting the unit. Upon loss of one power source the unit automatically switches to the other source without interrupting device operation.

Microphone



A microphone may be connected using the external 3-pin balanced microphone input provided. The default nominal input level is -50dBu. Phantom power is not available on this input. If using this input, the microphone and its connection will not be monitored.

The PSKIT-1 also includes a 5-pin internal connector for supporting a Biamp monitored microphone (optional accessory). This connection is not accessible from the outside of the enclosure and must only be used with a Biamp supplied microphone. If the internal connector is being used with a monitored microphone, the LK1 and LK2 jumpers must be removed. By default the jumpers are installed, which disables the monitoring functionality so that a standard (3-pin) microphone may be used.

Do not use both the internal and external microphone connections at the same time.

VOCIA PAGING STATION KIT (PSKIT-1) FRONT PANEL

PTT Input



The Push-to-Talk function will be activated when the PTT pin is connected to Ground.

General Purpose Inputs

The PSKIT-1 supports 12 unmonitored Control Inputs for connection to a keypad interface numbered 0 through 9, as well as inputs for a Next and Previous scroll button. Each Control Input is activated with a momentary connection to Ground. Only one pin can be selected at once.

Pin	Labeled	Assignment
1	⌚	Ground
2	1	Keypad 1
3	2	Keypad 2
4	3	Keypad 3
5	4	Keypad 4
6	⌚	Ground
7	5	Keypad 5
8	6	Keypad 6
9	7	Keypad 7
10	8	Keypad 8
11	⌚	Ground
12	9	Keypad 9
13	10	Keypad 0
14	11	Next Scroll
15	12	Previous Scroll

General Purpose Outputs

Two General Purpose Outputs are used to indicate the Wait and Talk states.

Once the PTT is active the “Wait” output will assert while the system establishes the necessary audio paths, checks for zone availability and plays the chime (if selected). The “Talk” output will assert once the audio path is live.

Pin	Labeled	Assignment
1	⌚	Ground
2	1	Wait
3	2	<not currently in use>
4	3	Talk
5	12V	12V DC (100mA)

VOCIA PAGING STATION KIT (PSKIT-1) FRONT PANEL

RS-232

A female RS-232 serial port is provided for Vicia Text Protocol (VTP) connectivity. Please refer to the software help file for all supported commands.

Pin Out	Function
Pin 2	Transmit Data TXD output
Pin 3	Receive Data RXD input
Pin 5	GND / 0V

Aux Port

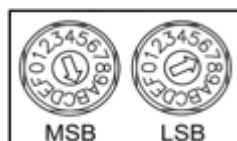
A RJ-45 connector is available internally for use with Biamp accessories. This port is not an Ethernet port and must not be connected to a switch, PoE supply, or other Ethernet network devices.

Network Connection

The PSKIT-1 is a CobraNet device and uses the RJ-45 connector for communications with other Vicia devices. It is possible to use this network connection with an 802.3af or 802.3at (type 1) PoE switch or external PoE Supplies to provide power to the device. Alternatively, if the device is being powered using the Power Connector and an external 24V DC supply, a connection to the CobraNet network must still be available for the device communications. All CobraNet routing and bundle assignments are processed by the Vicia devices locally. Vicia makes dynamic use of available bundles in CobraNet. A 100Base-T Ethernet switch (not repeater hub) is required when networking multiple units. CobraNet utilizes standard CAT5, CAT5e, CAT6, or CAT7 cabling, which has a specified maximum length of 328 feet (100 meters). Additional Ethernet switches, or switches which provide fiber-optic interface, can be used to extend the physical distance between units within a network. Please note that CobraNet limits network extensions to 7 hops (one-way transmissions) within a network. The RJ-45 connector provides two LEDs that indicate Ethernet link and network activity.

Left LED	Right LED	Description
None	None	No Data Connectivity or CobraNet activity.
Amber	Flashing green	Link established and CobraNet activity detected. The unit is acting as the CobraNet Performer.
Flashing amber	Flashing green	Link established and CobraNet activity detected. The unit is acting as the CobraNet Conductor.
Flashing amber	None	CobraNet fault. Check cabling and configuration for errors.

Device ID switches



The rotary ID switches are located on the front of the unit and are used to provide a unique Device ID. The switches are in hexadecimal format. All Vicia units of the same type must have a unique Device ID to function properly within a Vicia Paging World (for instance, it is not possible to have two Vicia Devices of the same type with the same Device ID of hex 07).

As an example, to assign a Device ID of hex 07, turn the LSB switch to 7 and leave the MSB switch on 0. To create an ID of hex B7, turn the LSB switch to 7 and turn the MSB switch to B. Device ID switches should be set using a 0.1 inch (2.5mm) to 0.12 inch (3.0mm) flat blade screwdriver. More information on setting IDs and the hexadecimal numbering scheme used can be found in the Vicia Software Help File.

VOCIA PAGING STATION KIT (PSKIT-1) SPECIFICATIONS

Vocia Paging Station Kit Interface 1 SPECIFICATIONS

Frequency Response:	+0, -1dB, 100Hz to 20kHz	A/D Converters:	24-bit (48kHz sampling)
Effective Input Headroom:	30dB	Connection:	RJ-45 with shielded Ethernet (CAT5, CAT5e, CAT6 or CAT7)
Gain:	Adjustable in 1dB steps over a 30dB range	PoE Power:	802.3at Type 1 Class 2
System Headroom:	18dB	DC Power:	24V DC 6W
Nominal Input Level:	-50dBu		
THD + N:	<0.05% 20Hz to 8kHz	Overall Dimensions:	
General Purpose Inputs:		Height:	1.6" (40.6mm)
Quantity:	12	Width:	5.24" (133mm)
Type:	Contact Closure / TTL	Length:	11.54" (293mm)
TTL Logic Low:	0 – 0.8V	Weight:	2.25lb (1.02kg)
TTL Logic High:	2 – 5V	Ambient Operating Temperature Range:	32-113° F (0–45° C)
General Purpose Outputs:		Altitude:	0–10,000 feet (0-3000 meters)
Quantity:	3	Humidity:	0% to 95% non-condensing
Max Continuous Current:	200mA	Compliance:	CE marked (Europe)
Max External Supply:	40V		RoHS Directive (Europe)
Reference Output:	12V DC 100mA		UL Certified Safety
RS-232:			E215636 (US, Canada)
Baud:	57600 bps		FCC Part 15B (USA)
Data Bits:	8		RCM (Australia)
Parity:	None		EAC (Eurasian Customs Union)
Stop Bits:	1		
Flow Control:	None		

WARRANTY

BIAMP SYSTEMS IS PLEASED TO EXTEND THE FOLLOWING 5-YEAR LIMITED WARRANTY TO THE ORIGINAL PURCHASER OF THE PROFESSIONAL SOUND EQUIPMENT DESCRIBED IN THIS MANUAL

1. BIAMP Systems warrants to the original purchaser of new products that the product will be free from defects in material and workmanship for a period of 5 YEARS from the date of purchase from an authorized BIAMP Systems dealer, subject to the terms and conditions set forth below.
2. If you notify BIAMP during the warranty period that a BIAMP Systems product fails to comply with the warranty, BIAMP Systems will repair or replace, at BIAMP Systems' option, the nonconforming product. As a condition to receiving the benefits of this warranty, you must provide BIAMP Systems with documentation that establishes that you were the original purchaser of the products. Such evidence may consist of your sales receipt from an authorized BIAMP Systems dealer. Transportation and insurance charges to and from the BIAMP Systems factory for warranty service shall be your responsibility.
3. This warranty will be VOID if the serial number has been removed or defaced; or if the product has been altered, subjected to damage, abuse or rental usage, repaired by any person not authorized by BIAMP Systems to make repairs; or installed in any manner that does not comply with BIAMP Systems' recommendations.
4. Electro-mechanical fans, electrolytic capacitors, gooseneck microphones, cords connecting handheld microphones, hard-drives, displays, and normal wear and tear of items such as paint, knobs, handles, keypads and covers are not covered under this warranty. All server-based devices are warranted for 3 years only.
5. This warranty is in lieu of all other warranties, expressed or implied. Biamp Systems disclaims all other warranties, expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose.
6. The remedies set forth herein shall be the purchaser's sole and exclusive remedies with respect to any defective product.
7. No agent, employee, distributor or dealer of Biamp Systems is authorized to modify this warranty or to make additional warranties on behalf of Biamp Systems. Statements, representations or warranties made by any dealer do not constitute warranties by Biamp Systems. Biamp Systems shall not be responsible or liable for any statement, representation or warranty made by any dealer or other person.
8. No action for breach of this warranty may be commenced more than one year after the expiration of this warranty.
9. Biamp systems shall not be liable for special, indirect, incidental, or consequential damages, including lost profits or loss of use arising out of the purchase, sale, or use of the products, even if BIAMP Systems was advised of the possibility of such damages.

FCC COMPLIANCE

FCC NOTICE - CLASS B DIGITAL DEVICE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential as well as in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1) Reorient or relocate the receiving antenna, 2) Increase the separation between the equipment and receiver, 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected or 4) Consult the dealer or an experienced radio/TV technician for help.



EC Declaration of Conformity

Biamp Systems Corporation, as manufacturer having sole responsibility, hereby declares that our delivered version of the following described product complies with the applicable provisions of the DIRECTIVES below except as noted herein. Any alterations to the product not agreed upon and directed by Biamp Systems Corporation will invalidate this declaration.

Brand Name: Vocia®

Product Description: Paging Station Control Interface

Model: PSKIT-1

Applicable EC Directives: Applicable Harmonized Standards:

LVD Directive (2006/95/EC)	Safety	EN 60065:2002, A1:2006, A11:2008, A2:2010, A12:2011
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EMC Directive (2004/108/EC)	Emissions	EN 55103-1:2009, Environment E2
	Immunity	EN 55103-2:2009, Environment E2

RoHS Directive (2011/65/EU) RoHS Recast

Special Considerations for Product Environment or Compliance:

- Use only CE marked Power over Ethernet (PoE) power supply and/or DC power supply.
- Shielded cabling must be used for system connections.

Technical Construction File, Location and Contact:

Biamp Systems Corporation	phone:	+1 503.641.7287
9300 S.W. Gemini Drive	fax:	+1 503.626.0281
Beaverton, OR USA 97008	e-mail:	compliance@biamp.com

Authorized Representative: Larry Copley, Compliance Engineer

Authorized Signature:

A handwritten signature in black ink that reads "Larry Copley".

Date and Place Issued:

November 2013, Beaverton, Oregon USA



RoHS Compliance and Hazardous Substance Table

This Biamp product, including all attendant cables and accessories supplied by Biamp, meets all requirements of EU Directives 2011/65/EU.

The information below is presented in accordance with parallel requirements of Chinese law SJ/T11363-2006.

有害物质表

Biamp Systems Corporation
公布装置 (Announcement Station)
Vocia PSKIT-1

部件名称	有毒有害物质或元素					
	Pb 铅	Hg 汞	Cd 镉	Cr+6 六价铬	PBB	PBDE
设备机箱 (Equipment Chassis)	X	O	X	O	O	O
插拔式接线端子 (Plug-in Terminal Blocks)	O	O	O	O	O	O
扎带 (Cable Ties)	O	O	O	O	O	O
光盘 (CD ROM)	O	O	O	O	O	O
手册和其他书面文档 (Manual and Paper Documents)	O	O	O	O	O	O
包装箱和所有包装材料 (Box and Packing Materials)	O	O	O	O	O	O

O: 表示该部件所有均质材料中的这种有毒有害物质低于 SJ/T11363-2006 的限制要求。

X: 表示该部件中至少有一种均质材料所含的这种有毒有害物质高于 SJ/T11363-2006 的限制要求。

在电触头和（或）镀镉所含的均质材料中，镉及其化合物的含量可以超过 0.01%，但欧盟指令 91/338/EEC（根据欧盟指令 76/769/EEC）限制销售和使用某些危险物质和制剂部分中所禁止的用途除外

在以下一种或多种物质所含的均质材料中，铅及其化合物的含量可以超过 0.1%：

- 1) 电子元器件中玻璃内所含的铅
- 2) 铅在钢材中是作为一种合金元素，含量可达 0.35%
- 3) 铅在铝材中是作为一种合金元素，含量可达 0.4%
- 4) 铅在铜材中是作为一种合金元素，含量可达 4%
- 5) 高熔点类焊料中的铅（即铅料合金，铅含量超过 85%）
- 6) 电子陶瓷部件内的铅
- 7) 由两种以上元素组成的焊料中所含的铅，用于连接针脚和微处理器包装，其中铅的含量超过 80% 但低于 85%
- 8) 顺应针连接系统内的铅
- 9) 倒装芯片封装中半导体芯片及载体之间形成可靠连接所用焊料中的



在正常使用情况下，中国环保使用期限为 10 年，条件是：

- 环境温度为 0-40C (32-104°F)
- 湿度为 0-95%，无凝结
- 海拔高度为 0-2000-米
- 气流不受阻碍
- 没有水或其他液体进入任何部件
- 电源为 IEEE 802.3af PoE Class 2 和 24VDC, 6W
- 部件没有损坏（损坏部件应立即修理）
- 由工厂授权人员使用批准的材料进行所有维修